

Magnetic resonance imaging (MRI) procedure in cardiovascular system and risks

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Abstract

Magnetic resonance imaging (MRI) is a non-invasive test that uses a magnetic field and radiofrequency signals to generate particularised pictures of organs and structures inside of your body. It can also be used to test your heart and blood vessels, and to notify areas of the brain affected by stroke regions. Magnetic resonance imaging is also sometimes called as nuclear magnetic resonance imaging. The test can also show your heart's structure muscle, valves, and all chambers of heart and how well blood flows through your heart and major vessels.

Keywords: Magnetic Resonance; Heart Muscle; Artery; Blood Vessels

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Introduction

Magnetic resonance imaging of the heart, the doctor sees the patient heart is damaged from a heart attack, or if there is a lack of blood flows to the heart muscle because of narrowed or blocked arteries mainly works. MRI of the pelvis parts and legs are used to help to diagnose peripheral artery disease. MRI may be used instead of other tests that are mainly used to ionizing radiation or iodine-containing contrast dyes or both such as X-ray, angiograms, computed tomography (CT) scans are widely used. Using MRI scan to look at blood vessels and it explains how the blood flows through them are called as magnetic resonance angiography. Unlike a traditional X-ray angiogram, this procedure does not require inserting a catheter into your arteries.

Magnetic resonance imaging is a safe and painless test for most people. People with any type of metal device are inside the body should not have an MRI results as unless the device is certified as MRI safe. Such devices are including the Pacemakers and installation cardioverter defibrillators, Inner ear introduction, Neuro-muscular stimulators such as those are used for the pain management or muscle rehabilitation, Implanted drug insertion pump devices, Intrauterine machines, Brain aneurysm clips that

are not approved for MRI, some dental implants devices to check with your dentist to make sure they are not magnetic, avoid MRI if you have metal species in your body. Metal fragments are in the eyes can be notified and especially dangerous because the magnet may move to the metal, causing eye damage or blindness. For some MRI scans a special contrast dye without iodine may be used sometimes. This contrast dye is considered to not safe for the humans with advanced kidney failure.

Conclusion

A cardiac MRI is a common test, and it is widely used to assess and diagnose the several conditions. Some of these includes the congenital heart defects, coronary heart disease, damage from a heart attack, heart failure, heart valve defects, inflammation of the membrane around the heart (pericarditis), since MRIs shows to cross divisions of the body, they can also help to explain or clarify the results of other tests, such as CT scans and X-rays. Cardiac MRI has few risks. In rare conditions, the contrast dye may harm people who have kidney or liver related diseases, or it may cause an allergic reaction in body. Researchers are studying whether so many contrast dyes injected and defined as four or more, may cause other adverse effects.